UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,332	07/07/2005	Goran Mardh	1718-0218PUS1	2500

2292 7590 11/30/2006

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
KHARE, DEVESH	

ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/519,332	MARDH, GORAN	
	Examiner	Art Unit	
	Devesh Khare	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *10-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/23/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The preliminary amendment dated 12/23/2004 is acknowledged. The applicant's election of Group I claims 1-9 dated 10/03/2006 is acknowledged. Claims 10 and 12 have been amended.

Response to Election with Traverse

Applicant's election with traverse of the pharmaceutical preparation comprising a synergistic combination of abacacvir and alovudine and a pharmaceutical carrier defined by Group I (claims 1-9) is acknowledged. The traversal is on the ground(s) that "the Examiner applies the incorrect analysis of the special technical feature that links these claims". This is not found persuasive because the examiner's restriction was based on the 371 application wherein applicants claims encompass two distinct classes of inventions: (1) a pharmaceutical preparation comprising a synergistic combination of abacavir and alovudine and a pharmaceutical carrier, classes 514, 424 and 536, subclass various.; and (2) a method for the treatment of multiresistant HIV in a patient comprising administering to said patient an effective amount of the combination of abacavir and alovudine of Group I, class 514, subclass various.

It is noted that alovudine compound belongs to a class of compounds of 2'.3'-dideoxy-3'-fluoro pyrimidine nucleosides which are well known for their potent activity against adenovirus infections. For example said compounds can be used in a method for the treatment of respiratory diseases such as pharyngitis, coughing and conjunctivitis (U.S. 5,376,644: col.1, lines 12-24), which would be burdensome to the examiner as it cannot be assumed that the modes of action of alovudine in the treatment of multiresistant HIV in a patient for one method of treatment would be the same for another method of

treatment associated in a method for the treatment of respiratory diseases such as pharyngitis, coughing and conjunctivitis. The requirement is still deemed proper and is therefore made FINAL.

Claims 10-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

An action on the merits of claims 1-9 is contained herein below.

Objection

Claim 7 is objected to because of the following informalities:

In claim 7, the abbreviations "ED50" should be preceded in their first occurrence by the specific identity of the entities said abbreviations are intended to represent in the claims. Thereafter, the use of the abbreviation in the claims will be favorably considered and explicitly understood.

Appropriate correction is required.

35 U.S.C. 112, second paragraph rejection

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is vague and indefinite. Claim 8 recites, the phrase "the ratio 1-10: 200-800", it is unclear if the said ratio is weight ratio or molar ratio. In absence of the specific unit of alovudine and abacavir used to represent the ratio, claim 8 is vague and indefinite.

35 U.S.C. 103(a) rejection

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being obvious over Margolis et al. (Margolis) (U.S. Patent 6,514,979) in view of Harmenberg et al. (Harmenberg) (U.S. Patent 5,571,798).

Alovudine, a pyrimidine nucleoside is also known as 3'-deoxy-3'-flurorothymidine (FLT) and abacavir, a guanine nucleoside is also known as ((1R,4S)-9-[4-(hydroxymethyl)-2-cyclo-penten-1-yl] guanine (PG publication of the instant application [0002-0003]).

Margolis teaches the synergistic combinations of guanosine analog such as abacavir with inosine monopohosphate degydrogenase inhibitors, pharmaceutical compositions for treating an HIV-1 infection (col.1, lines 11-20). Furthermore, it is noted that alovudine (3'-deoxy-3'-flurorothymidine) and AZT (3'-azido-3'-deoxythymidine) are pyrimidine nucleoside analogs that have been widely used alone or in combination in anti-retroviral pharmaceutical applications (col.1, lines 52-62). Margolis also discloses that the composition comprising abacavir can further comprises nucleoside compounds such as

stavudine and zalcitabine (col.14, lines 1-3). Margolis discloses that abacavir can be used in the unit dosage forms containing 10-1000 mg (col.12, line 65). Margolis discloses the use of a pharmaceutical carrier in the preparation of said synergistic composition (col.15, lines 15-23). Margolis's composition can also comprise a nucleoside analog with abacavir in said synergistic combination, however the prior art is silent in disclosing specifically the presence of a nucleoside analog alovudine, which is structurally close to AZT.

Harmenberg discloses that AZT (3'-azido-3'-deoxythymidine) and its close structural analog alovudine (3'-deoxy-3'-flurorothymidine) are used against AIDS (col.1, lines 55-67). Harmenberg teaches an antiviral synergistic combination of 3'-fluoro-2',3'-dideoxy nucleoside compound and an effective amount of 2',3'-dideoxy nucleoside compound (abstract). Harmenberg discloses the synergistic effects of alovudine (FLT) in combination with a second nucleoside compound such as 2',3'-dideoxy guanosine (col.2, line 67 and col.3, line 22). The synergistic ratio of said nucleoside compounds from 50:1 to 1:50 (col.3, line 45). Furthermore, Harmenberg teaches the amounts of alovudine between 0.1 to 100 mg/kg body weight (col.4, line 11).

With regard to the very broad ranges of the amounts of alovudine and abacavir and the ratio thereof claimed in claims 2-8, it would be within the scope of the artisan in this art to optimize them through routine experimentation. Furthermore, claimed amounts are obvious over cited prior arts: Margolis teaches the synergistic amounts of abacavir and Harmenberg teaches the synergistic amounts of alovudine, used in the treatment of HIV.

With regard to claim 9, it is noted that the claim comprises an information insert containing direction on the use. In a composition claim, how the composition is used does not have any patentable weight towards the claimed composition.

It would have been obvious to person having ordinary skill in the art at the time the invention was made to prepare a pharmaceutical composition comprising the combination of abacavir and alovudine and a pharmaceutical carrier, because Margolis teaches to combine abacavir, a guanine nucleoside compound with a pyrimidine nucleoside compound; and Harmenberg's teaches to combine alovudine, a pyrimidine nucleoside compound with a guanine nucleoside compound for their synergistic effects toward the treatment of HIV in a patient. The motivation is provided by Harmenberg, the prior art suggests that there is need for new ant-HIV drugs with less toxicity than AZT and the combination of nucleoside compounds with different modes of action in cell culture can cause synergistic effects against HIV (col.2, lines 4-8).

It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form third composition to be used for the very same purpose....[T]he idea of combining them flows logically from their having been individually taught in the prior art (*In re Kerkhoven,* 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Devesh Khare whose telephone number is (571)272-0653. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anna Jiang, Supervisory Patent Examiner, Art Unit 1623 can be reached at (571)272-0627. The official fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khare

Devesh Khare, Ph.D.,J.D.
Art Unit 1623

November 25, 2006